

WHAT IS CLAIMED IS:

1. A method of extracting text information from a moving image, comprising the steps of:

generating moving image information by photographing an object to be photographed, which contains text;

extracting a still image contained in the moving image information;

identifying a text region contained in the still image; and

converting image information of the identified text region into text information.

2. A method according to claim 1, wherein the step of generating the moving image information by photographing the object to be photographed comprises the steps of:

checking if the object to be photographed is set on a document table;

making display for prompting an operator to set the object to be photographed when the object to be photographed is not set; and

generating the moving image information by photographing the object to be photographed, which is set on the document table.

3. A method according to claim 1, wherein the step of extracting the still image contained in the moving image information comprises the steps of:

extracting a still image having a moving rate not more than a predetermined value of an image contained in the moving image information; and

storing the extracted still image in a memory.

4. A method according to claim 3, wherein the memory is a computer-readable recording medium.

5. A method according to claim 1, wherein the step of identifying the text region contained in the still image, comprises the steps of:

checking if text of the text region is recognizable, increasing, if the text is not recognizable and photographing is in progress, a zoom ratio of a photographing device until

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the text becomes recognizable, and increasing, if the text is not recognizable and photographing has already been done, a zoom ratio of the photographed still image;

generating, when text does not become recognizable if a maximum zoom ratio is set, image information obtained by combining the text region and a non-text region contained in the still image, and

the step of converting the image information in the identified text region into the text information, comprises the step of:

converting, if the text of the text region is recognizable, the image information in the text region into the text information by executing an OCR process of the text region.

6. A method according to claim 5, wherein the step of increasing the zoom ratio of the photographing device, comprises the step of:

moving the image until a horizontal edge and/or a vertical edge are/is detected after the zoom ratio is increased, checking if the text region is present, and passing, if the text region is present, the control to the step of converting the image region in the identified text region into the text information.

7. A method of extracting text information from a moving image, comprising the steps of:

on a user side,

generating moving image information by photographing an object to be photographed, which contains text; and

sending the moving image information to a service provider via a communication network, and

on the service provider side,

extracting a still image contained in the received moving image information;

identifying a text region contained in the still image;

converting image information of the identified text region into text information; and

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sending the converted text information to the user via the communication network or sending a recording medium that stores the text information to the user.

8. A method according to claim 7, wherein the step of generating the moving image information by photographing the object to be photographed, comprises the steps of:

checking if the object to be photographed is set on a document table;

making display for prompting an operator to set the object to be photographed when the object to be photographed is not set; and

generating the moving image information by photographing the object to be photographed, which is set on the document table.

9. A method according to claim 7, wherein the step of extracting the still image contained in the moving image information, comprises the steps of:

extracting a still image having a moving rate not more than a predetermined value of an image contained in the moving image information; and

storing the extracted still image in a memory.

10. A method according to claim 9, wherein the memory is a computer-readable recording medium.

11. A method according to claim 7, wherein the step of identifying the text region contained in the still image, comprises the steps of:

checking if text of the text region is recognizable, increasing, if the text is not recognizable and photographing is in progress, a zoom ratio of a photographing device until the text becomes recognizable, and increasing, if the text is not recognizable and photographing has already been done, a zoom ratio of the photographed still image;

generating, when text does not become recognizable if a maximum zoom ratio is set, image information obtained by combining the text region and a non-text region contained in the still image, and

the step of converting the image information in the identified text region into the text information, comprises the step of:

converting, if the text of the text region is recognizable, the image information in the text region into the text information by executing an OCR process of the text region.

12. A method according to claim 11, wherein the step of increasing the zoom ratio of the photographing device, comprises the step of:

moving the image until a horizontal edge and/or a vertical edge are/is detected after the zoom ratio is increased, checking if the text region is present, and passing, if the text region is present, the control to the step of converting the image region in the identified text region into the text information.

13. An apparatus for extracting text information from a moving image, comprising:

a photographing device for generating moving image information by photographing an object to be photographed, which contains text;

a still image extraction unit for extracting a still image contained in the moving image information;

a text region identification unit for identifying a text region contained in the still image; and

a text information conversion unit for converting image information of the identified text region into text information.

14. An apparatus according to claim 13, wherein said still image extraction unit comprises:

an image moving rate discrimination unit for extracting a still image having a moving rate not more than a predetermined value of an image contained in the moving image information; and

a memory for storing the extracted still image.

15. An apparatus according to claim 14, wherein said memory is a computer-readable recording medium.

16. An apparatus for extracting text information from a moving image, comprising:

on a user side,

a photographing device for generating moving image information by photographing an object to be photographed, which contains text;

a sending device for sending the moving image information to a service provider via a communication network, and

on the service provider side,

a still image extraction unit for extracting a still image contained in the moving image information;

a text region identification unit for identifying a text region contained in the still image;

a text information conversion unit for converting image information of the identified text region into text information; and

a sending device for sending the converted text information to the user via the communication network.

17. An apparatus according to claim 16, wherein said still image extraction unit comprises:

an image moving rate discrimination unit for extracting a still image having a moving rate not more than a predetermined value of an image contained in the moving image information; and

a memory for storing the extracted still image.

18. An apparatus according to claim 17, wherein said memory is a computer-readable recording medium.

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